

Abstract:

Provided is a method for preparing uniformly sized and shaped, mono-dispersed microcapsules using miniemulsion polymerization. In microcapsules prepared by the method, a liquid or solid core encapsulated by a polymer shell has 10 to 80 % by volume of the microcapsules. Since miniemulsion particles produced at an early stage of the method are stable, an organic material which is well dissolved in monomer particles and has a higher interfacial tension with water, relative to the polymer shell, can be uniformly positioned in polymer particles. Furthermore, when a crosslinking agent is added during the polymerization, single-core microcapsules can be obtained. In addition, use of an oil-soluble initiator can prevent formation of secondary particles and addition of a secondary initiator during the polymerization can increase the yield of the uniformly sized and shaped microcapsules.